

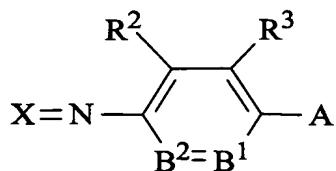
LISTING OF THE CLAIMS:

Claim 1 (Currently Amended): An ink-jet ink which comprises a dye dispersed product, an oil-soluble dye being dissolved in a high boiling point organic solvent which has a boiling point of 150°C or more and a specific inductive capacity at 25°C of 3 to 12, said oil-soluble dye being emulsified and dispersed in a water-based medium, and said dye dispersed product being formed, wherein the volume average particle size of dispersed particles in said dye dispersed product is from 1 to 100 nm.

Claim 2 (Canceled)

Claim 3 (Currently Amended): An ink-jet ink according to claim 1, An ink-jet ink which comprises a dye dispersed product, an oil-soluble dye being dissolved in a high boiling point organic solvent which has a boiling point of 150°C or more and a specific inductive capacity at 25°C of 3 to 12, said oil-soluble dye being emulsified and dispersed in a water-based medium, and said dye dispersed product being formed,

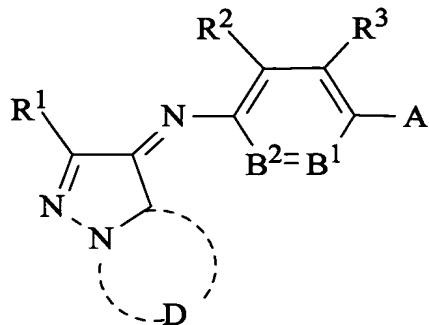
wherein said oil-soluble dye is an oil-soluble dye which is represented in the following formula (I):



Formula (I)

wherein, X represents the residue of a color coupler;
A represents one of -NR⁴R⁵ and a hydroxyl group;
R⁴ and R⁵ represent respectively independently one of a hydrogen atom, an aliphatic group, an aromatic group, and a heterocyclic group;
B¹ represents one of =C (R⁶) - and =N-;
B² represents one of -C(R⁷) = and -N=;
R², R³, R⁶, and R⁷ represent respectively independently one of a hydrogen atom, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR⁵¹, -SR⁵², -CO₂R⁵³, -OCOR⁵⁴, -NR⁵⁵R⁵⁶, -CONR⁵⁷R⁵⁸, -SO₂R⁵⁹, -SO₂NR⁶⁰R⁶¹, -NR⁶²CONR⁶³R⁶⁴, -NR⁶⁵CO₂R⁶⁶, -COR⁶⁷, -NR⁶⁸COR⁶⁹, and -NR⁷⁰SO₂R⁷¹; and
R⁵¹, R⁵², R⁵³, R⁵⁴, R⁵⁵, R⁵⁶, R⁵⁷, R⁵⁸, R⁵⁹, R⁶⁰, R⁶¹, R⁶², R⁶³, R⁶⁴, R⁶⁵, R⁶⁶, R⁶⁷, R⁶⁸, R⁶⁹, R⁷⁰ and R⁷¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group.

Claim 4 (Original): An ink-jet ink according to claim 3, wherein said oil-soluble dye which is represented in the formula (I) is an oil-soluble dye which is represented in the following formula (II):



Formula (II)

wherein, R², R³, A, B¹, and B² are synonymous with R², R³, A, B¹, and B² in the formula (I);

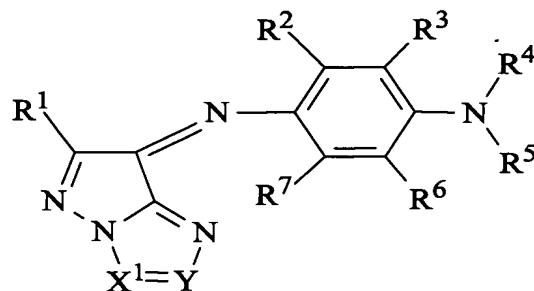
R¹ represents one of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR¹¹, -SR¹², -CO₂R¹³, -OCOR¹⁴, -NR¹⁵R¹⁶, -CONR¹⁷R¹⁸, -SO₂R¹⁹, -SO₂NR²⁰R²¹, -NR²²CONR²³R²⁴, -NR²⁵CO₂R²⁶, -COR²⁷, -NR²⁸COR²⁹, and -NR³⁰SO₂R³¹;

R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁴, R²⁵, R²⁶, R²⁷, R²⁸, R²⁹, R³⁰, and R³¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group;

D represents an atom group which forms one of a five-membered nitrogen-containing heterocyclic ring and a six-membered nitrogen-containing heterocyclic ring which may be substituted for at least one of an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR⁸¹, -SR⁸², -CO₂R⁸³, -OCOR⁸⁴, -NR⁸⁵R⁸⁶, -CONR⁸⁷R⁸⁸, -SO₂R⁸⁹, -SO₂NR⁹⁰R⁹¹, -NR⁹²CONR⁹³R⁹⁴, -NR⁹⁵CO₂R⁹⁶, -COR⁹⁷, -NR⁹⁸COR⁹⁹, and -NR¹⁰⁰SO₂R¹⁰¹; and

R^{81} , R^{82} , R^{83} , R^{84} , R^{85} , R^{86} , R^{87} , R^{88} , R^{89} , R^{90} , R^{91} , R^{92} , R^{93} , R^{94} , R^{95} , R^{96} , R^{97} , R^{98} , R^{99} , R^{100} , and R^{101} represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group.

Claim 5 (Original): An ink-jet ink according to claim 4, wherein said oil-soluble dye which is represented in the formula (II) is an oil-soluble dye which is represented in the following formula (III):

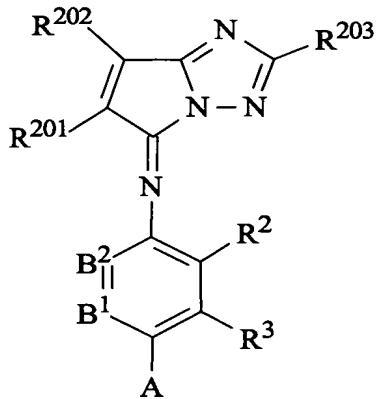


Formula (III)

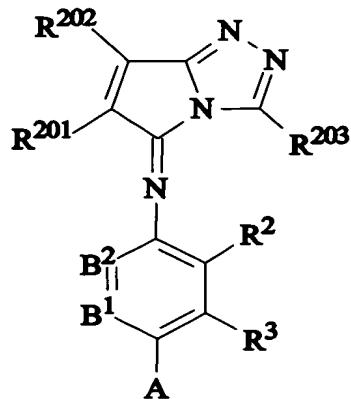
wherein, R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , and R^7 are synonymous with R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , and R^7 in the formula (II);

X^1 and Y represent respectively independently one of $-C(R^8)=$ and $-N=$;
 R^8 represents one of a hydrogen atom, an aliphatic group, and an aromatic group; and one of X^1 and Y is always $-N=$, and X^1 and Y are $-N=$ at different times.

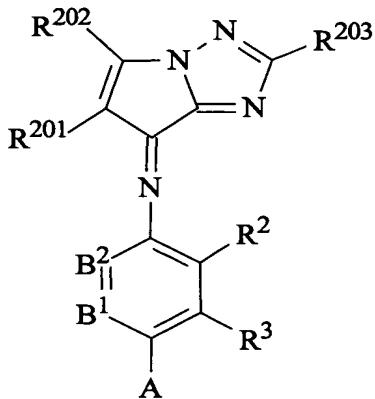
Claim 6 (Original): An ink-jet ink according to claim 3, wherein said oil-soluble dye which is represented in the formula (I) is at least one of oil-soluble dyes which are represented in the following formulae (IV-1) to (IV-4):



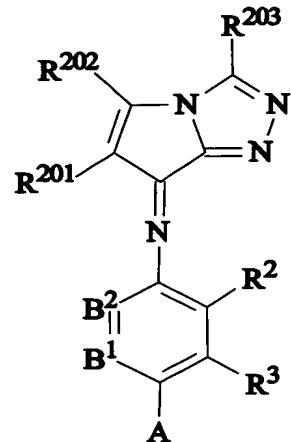
(IV-1)



(IV-2)



(IV-3)



(IV-4)

wherein, A, R², R³, B¹, and B² are synonymous with A, R², R³, B¹, and B² in the above formula (I);

R²⁰¹, R²⁰², and R²⁰³ represent respectively independently one of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR¹¹, -SR¹², -CO₂R¹³, -OCOR¹⁴, -NR¹⁵R¹⁶, -CONR¹⁷R¹⁸, -SO₂R¹⁹, -SO₂NR²⁰R²¹, -NR²²CONR²³R²⁴, -NR²⁵CO₂R²⁶,

-COR²⁷, -NR²⁸COR²⁹, and -NR³⁰SO₂R³¹;

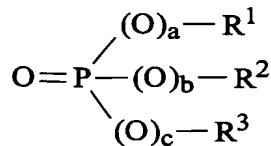
R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁴, R²⁵, R²⁶, R²⁷, R²⁸, R²⁹, R³⁰, and R³¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group; and

R²⁰¹ and R²⁰² may be combined with each other and form a ring structure.

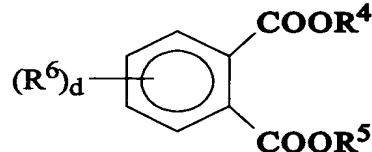
Claim 7 (Currently Amended): An ink-jet ink according to claim 1, An ink-jet ink which comprises a dye dispersed product, an oil-soluble dye being dissolved in a high boiling point organic solvent which has a boiling point of 150°C or more and a specific inductive capacity at 25°C of 3 to 12, said oil-soluble dye being emulsified and dispersed in a water-based medium, and said dye dispersed product being formed,

wherein said high boiling point organic solvent is at least one of high boiling point organic solvents which are represented in the following formulae [S-1] to [S-9]:

Formula [S-1]



Formula [S-2]



Formula [S-3]

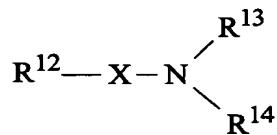




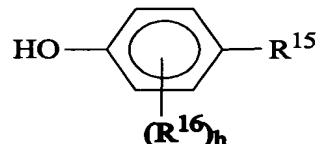
Formula [S-4]



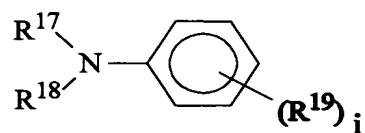
Formula [S-5]



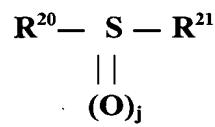
Formula [S-6]



Formula [S-7]



Formula [S-8]



Formula [S-9]

wherein: in the formula [S-1], R¹, R² and R³ each independently represents one of an aliphatic group and an aryl group, and a, b and c each independently represents 0 or 1;

in the formula [S-2], R⁴ and R⁵ each independently represents one of an aliphatic group and an aryl group, R⁶ represents one of a fluorine atom, chlorine atom, bromine atom, iodine atom, alkyl group, alkoxy group, aryloxy group, alkoxycarbonyl group and aryloxycarbonyl

group, d represents an integer from 0 to 3, and, in a case where d is more than 1, one R⁶ may be different from another R⁶;

in the formula [S-3], Ar represents an aryl group, e represents an integer from 1 to 6, and R⁷ represents one of an e-valent hydrocarbon group and a hydrocarbon group that is mutually bonded by an ether bond;

in the formula [S-4], R⁸ represents an aliphatic group, f represents an integer from 1 to 6, and R⁹ represents one of an f-valent hydrocarbon group and a hydrocarbon group that is mutually bonded by an ether bond;

in the formula [S-5], g represents an integer from 2 to 6, R¹⁰ represents a g-valent hydrocarbon group other than an aryl group, and R¹¹ represents one of an aliphatic group and an aryl group;

in the formula [S-6], R¹², R¹³ and R¹⁴ each independently represents one of a hydrogen atom, aliphatic group and aryl group, X represents one of -CO- and -SO₂-, and one of a pair R¹² and R¹³ and a pair R¹³ and R¹⁴ may bond together mutually to form a ring;

in the formula [S-7], R¹⁵ represents one of an aliphatic group, alkoxycarbonyl group, aryloxycarbonyl group, alkylsulfonyl group, arylsulfonyl group, aryl group and cyano group, R¹⁶ represents one of a fluorine atom, chlorine atom, bromine atom, iodine atom, aliphatic group, aryl group, alkoxy group and aryloxy group, h represents an integer from 0 to 3, and in a case where h is more than 1, one R¹⁶ may be different from another R¹⁶;

in the formula [S-8], R¹⁷ and R¹⁸ each independently represents one of an aliphatic group and an aryl group, R¹⁹ represents one of a fluorine atom, chlorine atom, ~~bromine~~ bromine atom,

iodine atom, aliphatic group, aryl group, alkoxy group and aryloxy group, i represents an integer from 0 to 4, and, in a case where i is more than 1, one R¹⁹ may be different from another R¹⁹; in the formula [S-9], R²⁰ and R²¹ each independently represents an aliphatic group or aryl group, and j represents 1 or 2.

Claim 8 (Previously Presented): A method of manufacturing an ink-jet ink, comprising dissolving an oil-soluble dye in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, and wherein a high-pressure emulsifying and dispersing device emulsifies and disperses said oil-soluble dye at a pressure of 50 MPa or more.

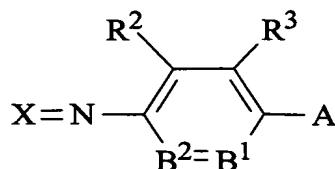
Claim 9 (Currently Amended): A method of manufacturing an ink-jet ink according to claim 8, A method of manufacturing an ink-jet ink, comprising dissolving an oil-soluble dye in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, and wherein a high-pressure emulsifying and dispersing device emulsifies and disperses said oil-soluble dye at a pressure of 50 MPa or more,

wherein a low boiling point organic solvent having a boiling point of 150°C or less is added to a dye dispersed product before the emulsification and dispersion, and the low boiling point organic solvent is substantially removed from the dye dispersed product after the emulsification and dispersion.

Claim 10 (Original): A method of manufacturing an ink-jet ink according to claim 9, wherein said low boiling point organic solvent is at least one low boiling point organic solvent selected from the group consisting of esters, alcohols, ketones, amides, and ethers.

Claim 11 (Currently Amended): ~~A method of manufacturing an ink-jet ink according to claim 8, A method of manufacturing an ink-jet ink, comprising dissolving an oil-soluble dye in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, and wherein a high-pressure emulsifying and dispersing device emulsifies and disperses said oil-soluble dye at a pressure of 50 MPa or more,~~

wherein said oil-soluble dye is an oil-soluble dye which is represented in the following formula (I):



Formula (I)

wherein, X represents the residue of a color coupler;

A represents one of $-NR^4R^5$ and a hydroxyl group;

R^4 and R^5 represent respectively independently one of a hydrogen atom, an aliphatic group, an aromatic group, and a heterocyclic group;

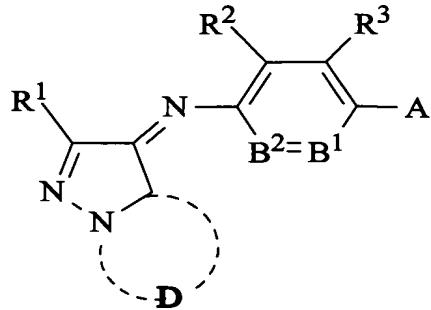
B^1 represents one of $=C(R^6)-$ and $=N-;$

B^2 represents one of $-C(R^7)=$ and $-N=;$

R^2 , R^3 , R^6 , and R^7 represent respectively independently one of a hydrogen atom, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, $-OR^{51}$, $-SR^{52}$, $-CO_2R^{53}$, $-OCOR^{54}$, $-NR^{55}R^{56}$, $-CONR^{57}R^{58}$, $-SO_2R^{59}$, $-SO_2NR^{60}R^{61}$, $-NR^{62}CONR^{63}R^{64}$, $-NR^{65}CO_2R^{66}$, $-COR^{67}$, $-NR^{68}COR^{69}$, and $-NR^{70}SO_2R^{71}$; and

R^{51} , R^{52} , R^{53} , R^{54} , R^{55} , R^{56} , R^{57} , R^{58} , R^{59} , R^{60} , R^{61} , R^{62} , R^{63} , R^{64} , R^{65} , R^{66} , R^{67} , R^{68} , R^{69} , R^{70} , and R^{71} represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group.

Claim 12 (Original): A method of manufacturing an ink-jet ink according to claim 11, wherein said oil-soluble dye which is represented in the formula (I) is an oil-soluble dye which is represented in the following formula (II):



Formula (II)

wherein, R^2 , R^3 , A , B^1 , and B^2 are synonymous with R^2 , R^3 , A , B^1 , and B^2 in the formula (I);

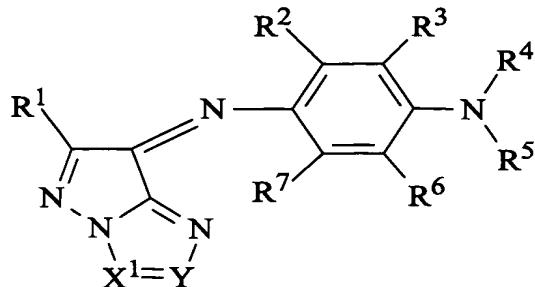
R^1 represents one of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, $-OR^{11}$, $-SR^{12}$, $-CO_2R^{13}$, $-OCOR^{14}$, $-NR^{15}R^{16}$, $-CONR^{17}R^{18}$, $-SO_2R^{19}$, $-SO_2NR^{20}R^{21}$, $-NR^{22}CONR^{23}R^{24}$, $-NR^{25}CO_2R^{26}$, $-COR^{27}$, $-NR^{28}COR^{29}$, and

-NR³⁰SO₂R³¹;

R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁴, R²⁵, R²⁶, R²⁷, R²⁸, R²⁹, R³⁰, and R³¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group;

D represents an atom group which forms one of a five-membered nitrogen-containing heterocyclic ring and a six-membered nitrogen-containing heterocyclic ring which may be substituted for at least one of an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR⁸¹, -SR⁸², -CO₂R⁸³, -OCOR⁸⁴, -NR⁸⁵R⁸⁶, -CONR⁸⁷R⁸⁸, -SO₂R⁸⁹, -SO₂NR⁹⁰R⁹¹, -NR⁹²CONR⁹³R⁹⁴, -NR⁹⁵CO₂R⁹⁶, -COR⁹⁷, -NR⁹⁸COR⁹⁹, and -NR¹⁰⁰SO₂R¹⁰¹; and R⁸¹, R⁸², R⁸³, R⁸⁴, R⁸⁵, R⁸⁶, R⁸⁷, R⁸⁸, R⁸⁹, R⁹⁰, R⁹¹, R⁹², R⁹³, R⁹⁴, R⁹⁵, R⁹⁶, R⁹⁷, R⁹⁸, R⁹⁹, R¹⁰⁰, and R¹⁰¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group.

Claim 13 (Original): A method of manufacturing an ink-jet ink according to claim 12, wherein said oil-soluble dye which is represented in the formula (II) is an oil-soluble dye which is represented in the following formula (III):



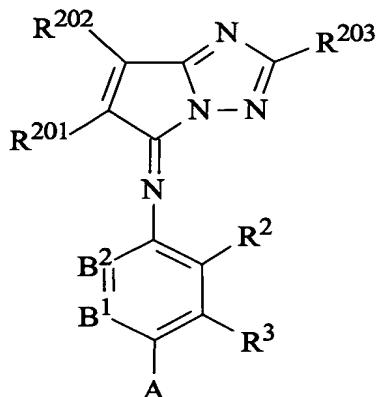
Formula (III)

wherein, R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , and R^7 are synonymous with R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , and R^7 in the formula (II);

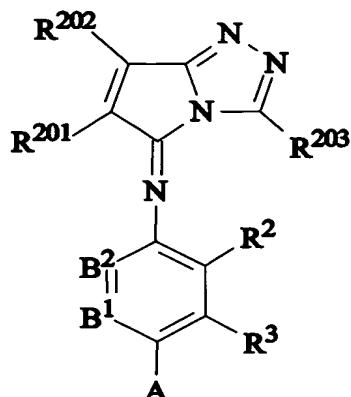
X¹ and Y represent respectively independently one of -C(R⁸)= and -N=;

R^8 represents one of a hydrogen atom, an aliphatic group, and an aromatic group; and one of X^1 and Y is always $-N=$, and X^1 and Y are $-N=$ at different times.

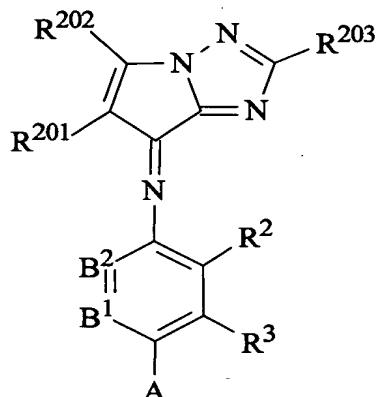
Claim 14 (Original): A method of manufacturing an ink-jet ink according to claim 11, wherein said oil-soluble dye which is represented in the formula (I) is at least one of oil-soluble dyes which are represented in the following formulae (IV-1) to (IV-4):



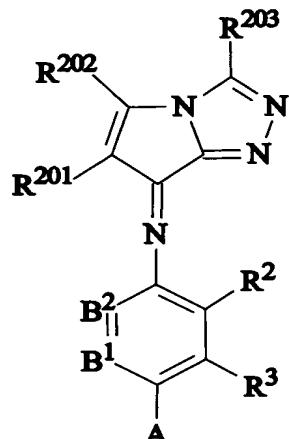
(IV-1)



(IV-2)



(IV-3)



(IV-4)

wherein, A, R², R³, B¹, and B² are synonymous with A, R², R³, B¹, and B² in the above formula (I);

R²⁰¹, R²⁰², and R²⁰³ represent respectively independently one of a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, -OR¹¹, -SR¹², -CO₂R¹³, -OCOR¹⁴, -NR¹⁵R¹⁶, -CONR¹⁷R¹⁸, -SO₂R¹⁹, -SO₂NR²⁰R²¹, -NR²²CONR²³R²⁴, -NR²⁵CO₂R²⁶,

-COR²⁷, -NR²⁸COR²⁹, and -NR³⁰SO₂R³¹;

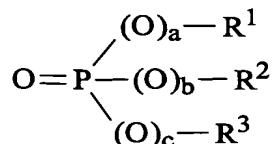
R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²⁰, R²¹, R²², R²³, R²⁴, R²⁵, R²⁶, R²⁷, R²⁸, R²⁹, R³⁰, and R³¹ represent respectively independently one of a hydrogen atom, an aliphatic group, and an aromatic group; and

R²⁰¹ and R²⁰² may be combined with each other and form a ring structure.

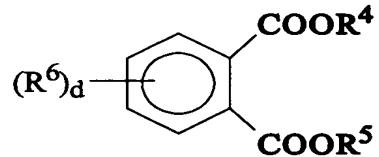
Claim 15 (Currently Amended): A method of manufacturing an ink-jet ink according to claim 8, A method of manufacturing an ink-jet ink, comprising dissolving an oil-soluble dye in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, and wherein a high-pressure emulsifying and dispersing device emulsifies and disperses said oil-soluble dye at a pressure of 50 MPa or more,

wherein said high boiling point organic solvent is at least one of high boiling point organic solvents which are represented in the following formulae [S-1] to [S-9]:

Formula [S-1]



Formula [S-2]



Formula [S-3]

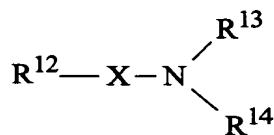




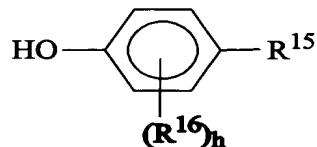
Formula [S-4]



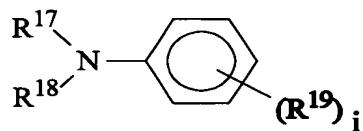
Formula [S-5]



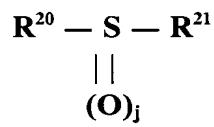
Formula [S-6]



Formula [S-7]



Formula [S-8]



Formula [S-9]

wherein: in the formula [S-1], R¹, R² and R³ each independently represents one of an aliphatic group and an aryl group, and a, b and c each independently represents 0 or 1;

in the formula [S-2], R⁴ and R⁵ each independently represents one of an aliphatic group and an aryl group, R⁶ represents one of a fluorine atom, chlorine atom, bromine atom, iodine atom, alkyl group, alkoxy group, aryloxy group, alkoxycarbonyl group and aryloxycarbonyl

group, d represents an integer from 0 to 3, and, in a case where d is more than 1, one R⁶ may be different from another R⁶;

in the formula [S-3], Ar represents an aryl group, e represents an integer from 1 to 6, and R⁷ represents one of an e-valent hydrocarbon group and a hydrocarbon group that is mutually bonded by an ether bond;

in the formula [S-4], R⁸ represents an aliphatic group, f represents an integer from 1 to 6, and R⁹ represents one of an f-valent hydrocarbon group and a hydrocarbon group that is mutually bonded by an ether bond;

in the formula [S-5], g represents an integer from 2 to 6, R¹⁰ represents a g-valent hydrocarbon group other than an aryl group, and R¹¹ represents one of an aliphatic group and an aryl group;

in the formula [S-6], R¹², R¹³ and R¹⁴ each independently represents one of a hydrogen atom, aliphatic group and aryl group, X represents one of -CO- and -SO₂-, and one of a pair R¹² and R¹³ and a pair R¹³ and R¹⁴ may bond together mutually to form a ring;

in the formula [S-7], R¹⁵ represents one of an aliphatic group, alkoxy carbonyl group, aryloxycarbonyl group, alkylsulfonyl group, arylsulfonyl group, aryl group and cyano group, R¹⁶ represents one of a fluorine atom, chlorine atom, bromine atom, iodine atom, aliphatic group, aryl group, alkoxy group and aryloxy group, h represents an integer from 0 to 3, and in a case where h is more than 1, one R¹⁶ may be different from another R¹⁶;

in the formula [S-8], R¹⁷ and R¹⁸ each independently represents one of an aliphatic group and an aryl group, R¹⁹ represents one of a fluorine atom, chlorine atom, bromine atom, ~~bromine~~ bromine atom,

iodine atom, aliphatic group, aryl group, alkoxy group and aryloxy group, i represents an integer from 0 to 4, and, in a case where i is more than 1, one R¹⁹ may be different from another R¹⁹; in the formula [S-9], R²⁰ and R²¹ each independently represents an aliphatic group or aryl group, and j represents 1 or 2.

Claim 16 (Currently Amended): An ink jet recording method comprising recording an ink-jet ink onto an image receiving material, wherein the ink-jet ink includes a dye dispersed product, an oil soluble dye being dissolved in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, said oil-soluble dye being emulsified and dispersed in a water-based medium, and said dye dispersed product being formed, wherein the volume average particle size of dispersed particles in said dye dispersed product is from 1 to 100 nm.

Claim 17 (Currently Amended): An ink jet recording method according to claim 16, An ink jet recording method comprising recording an ink-jet ink onto an image receiving material, wherein the ink-jet ink includes a dye dispersed product, an oil soluble dye being dissolved in a high boiling point organic solvent which has a boiling point of 150°C or more and has a specific inductive capacity at 25°C of 3 to 12, said oil-soluble dye being emulsified and dispersed in a water-based medium, and said dye dispersed product being formed, wherein the image receiving material has an image receiving layer which includes a white pigment.